3.15 Economics

Introduction

The treatments proposed in the action alternatives will have multiple effects on the economic environment. For example, logging companies contracted to harvest timber will employ local workers and provide a source of income. Merchantable timber could serve as an important input to production for local mills or generate investment in new infrastructure. These activities may also generate additional economic stimulus through expenditures made by the contracted companies.

The type and quantity of treatments vary for each proposed alternative and therefore each alternative will have a different effect on the economic environment.

This report delineates the economic impact area, outlines analysis methods, and describes the economic effects of the project which include the project feasibility, financial efficiency, and economic impacts. The affected environment section presents a variety of demographic, social and economic variables that describe the current state of the socioeconomic environment. Project feasibility and financial efficiency relate to the costs and revenues of implementing the project. Economic impacts relate to how the project affects the local economy in the surrounding area.

Summary of Effects

The economic effects of the Como Forest Health Project can be summarized by examining several key values that have been calculated for each of the three economic measures (project feasibility, financial efficiency, and economic impact). Table 3.15- 1 displays these values for each alternative.

Table 3.15- 1: Summary of Economic Effects

		ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Project Feasibility	Volume Harvested (CCF)	11,845	10,745	9,838
	Stumpage ($/CCF)	21.77	44.09	38.16
	Is Alternative Feasible?	Yes	Yes	Yes
Financial Efficiency	Revenue ($)	485,408	680,158	564,406
	PNV, Mandatory Expenditures Only ($)	47,000	255,000	181,000
	PNV, All Expenditures ($)	-208,578	-258,692	-268,417
Economic Impact	Total Jobs Contributed	82	78	72
	Total Labor Income ($)	3,809,000	3,595,000	3,307,000

The estimated stumpage rate for each alternative is greater than the base rate of $3.00/CCF and thus each alternative is considered feasible. This means that the timber contract for each alternative has a high likelihood of attracting bids. The project feasibility is a timber appraisal and only includes the cost of logging and necessary rehabilitation directly associated with harvesting.

Financial efficiency uses Present Net Value (PNV) to show the overall financial gain or loss from implementing a project. PNV, accounting for mandatory expenditures, is positive for each alternative. The mandatory PNV for Alternative 2 is much lower than the mandatory PNV for alternatives 3 and 4. Although alternative 2 generates the most timber volume, the cost to do so is much higher because of increased specified road construction and reconstruction, and temporary road construction. Alternative 2 also has more skyline logging which is more expensive than ground-based logging. Alternative 3 has the highest PNV because it generates a similar amount of volume but the aforementioned costs are significantly lower. Alternative 3 has a higher proportion of ground-based logging and all of the cutting units can be accessed from the existing road system. Alternative 4 also has a high proportion of ground-based logging but includes some specified and

temporary road construction. Thus mandatory PNV for alternative 4 is much greater than Alternative 2 and less than Alternative 3

The PNV taking into account all expenditures is negative for all three alternatives. This version of the PNV is a comparable value for each alternative. This is primarily because alternatives 3 and 4 have non-commercial thinning and associated burning costs that are much higher than Alternative 2.

The overall impact to the local economy would be positive for each alternative. Alternative 2 would contribute to the most jobs and labor income primarily because of higher timber volume harvested, and more contractual work including road construction.

3.15.1 Overview of Relevant Laws, Regulations, and Policies

The preparation of NEPA documents is guided by CEQ regulations for implementing NEPA [40 CFR 1500-1508]. NEPA requires that consequences to the human environment be analyzed and disclosed. The extent to which these environmental factors are analyzed and discussed is related to the nature of public comments received during scoping. NEPA does not require a monetary benefit-cost analysis. If an agency prepares an economic efficiency analysis, then one must be prepared and displayed for all alternatives [40 CFR 1502.23].

OMB Circular A-94 promotes efficient resource use through well-informed decision making by the Federal Government. It suggests agencies prepare an efficiency analysis as part of project decision making, and prescribes "present net value" as the criterion for the efficiency analysis.

The development of timber sale programs and individual timber sales is guided by agency direction found in Forest Service Manual (FSM) 2430. Forest Service Handbook (FSH) 2409.18 guides the financial and, if applicable, economic efficiency analysis for timber sales.

Many of the costs and benefits associated with a project are not quantifiable in financial terms for example, the benefit to wildlife from habitat improvement from a project. These costs and benefits are described qualitatively in the indicated resource sections of this document.

For the purposes of complying with the NEPA, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are qualitative considerations.

Additionally, the Bitterroot National Forest Plan (USDA Forest Service 1987) includes the following forest-wide goals, objectives, and standards affecting the economics of the area:

- Provide sawtimber and other wood products to help sustain a viable local economy, and provide an economically efficient sale program (Forest Plan page II-3).
- Maintain advance sale preparation at a level to provide flexibility in offering sales that are responsive to market conditions and economic efficiency (Forest Plan page II-6).
- All timber sale will be designed, as well as possible, to be affordable to purchasers under average market conditions at the time of sale (Forest Plan page II-21).

3.15.2 Methodology

The economic measures used for this report are project feasibility, financial efficiency, and economic impacts. These measures, including methodologies, are described below.

Project feasibility is used to determine if a project is feasible from a timber harvest perspective given current market conditions. The determination of feasibility relies on a residual value appraisal. The residual value is calculated as the revenue – based on local delivered log prices – minus the costs of logging and required rehabilitative work. The appraised value of a timber sale is referred to as

stumpage. The appraised stumpage rate from this analysis is compared to the base rate (a legally required minimum stumpage rate considered essential to cover required tree planting plus minimum payment to the Federal treasury). The project is considered feasible if the appraised stumpage rate exceeds the base rate. If the feasibility analysis indicates that the project is not feasible, the project may need to be modified. Infeasibility indicates an increased risk that the project may not attract bids and may not be implemented without supplemental funding.

A critical component of determining project feasibility is amount of timber to be harvested. This is expressed in terms of volume and the unit of measure used for this analysis is one hundred cubic feet (CCF). Often, costs or values associated with the timber harvest are expressed in terms of dollars per hundred cubic feet or $/CCF. For example, the base rate value referred to in the previous paragraph is $3.00/CCF.

To assist with determining feasibility, Forest Service Region 1 Alternative Feasibility tool is used. This spreadsheet assists the analyst with compiling and processing all of the information necessary to determine project feasibility.

Financial efficiency provides information relevant to the future financial position of the program if the project is implemented. Financial efficiency considers anticipated costs and revenues that are part of Forest Service monetary transactions. Present net value (PNV) is used as an indicator of financial efficiency and presents one tool to be used in conjunction with many other factors in the decision-making process. PNV combines benefits and costs that occur at different times and discounts them into an amount that is equivalent to all economic activity in a single year. A positive PNV indicates that the alternative is financially efficient. To calculate PNV, the Forest Service uses the Project Economic Analysis Tool (PEAT).

The PNV analysis is not intended to be comprehensive, incorporating a monetary expression of all known market and non-market benefits and costs, because economic efficiency is not the sole criterion upon which a decision is made. Many of the values and costs associated with natural resource management are best handled apart from, but in conjunction with, a more limited benefit-cost framework. Therefore, they are not described in financial or economic terms for this project, but rather are discussed in the various resource sections of this report.

Management of the forest is expected to yield positive benefits, but not necessarily financial benefits. Costs for restoration activities are based on recent experienced costs and professional estimates. Non-harvest related costs are included in the PNV analysis, but they are not included in appraised timber value.

Economic impacts are the potential direct, indirect, and cumulative effects on the economy. Economic impacts are estimated using input-output analysis. Input-output analysis is a means of examining relationships within an economy, both between businesses and between businesses and final consumers. It captures all monetary market transactions for consumption in a given time period. The resulting mathematical representation allows one to examine the effect of a change in one or several economic activities on an entire economy, all else constant. This examination is called impact analysis. The IMPLAN modeling system (Minnesota IMPLAN Group 2003) allows the user to build regional economic models of one or more counties for a particular year. The model for this analysis used the 2009 IMPLAN data. IMPLAN translates changes in final demand for goods and services into resulting changes in economic effects, such as labor, income, and employment of the affected area's economy.

The economically affected area is referred to in this report as the economic impact area. The Forest Service Economic and Social Analysis Handbook states that an economic impact area "should be defined as (1) a functional economic unit of a size appropriate to the [project] and (2) an area that

includes most of economic factors that are most directly affected by the [project]." It goes on to state that "a practical limitation is that economic impact areas must be some combination of individual counties."

The economic impact effects are measured by estimating the direct jobs and labor income generated by (1) the processing of the timber volume from the project, and (2) the dollars resulting from any restoration activities of the project into the impact area. The direct employment and labor income benefit employees and their families and, therefore, directly affect the local economy. Additional indirect and induced multiplier effects (ripple effects) are generated by the direct activities. Together the direct and indirect effects comprise the total economic impacts to the local economy.

The data used to estimate the direct effects from the timber harvest and processing were provided by the University of Montana's Bureau of Business and Economic Research (BBER). This national data is broken into multi-state regions and is considered more accurate than that which is available from IMPLAN. The Northern Rockies BBER region (Montana and Idaho) is used for this analysis. The BBER data represents the results of mill censuses that correlate production, employment, and labor income. The indirect and induced multiplier effects were estimated using the IMPLAN model for the economic impact area. For restoration and reforestation activities, the direct, indirect and induced effects were derived using IMPLAN.

Potential limitations of these estimates are the time lag in IMPLAN data and the data intensive nature of the input-output model. Significant changes in economic sectors since the latest data for IMPLAN have been adjusted using information from the University of Montana's Bureau of Business and Economic Research.

3.15.3 Affected Environment

3.15.3.1 Economic Impact Area

For this report the affected environment is synonymous with the economic impact area. Following Forest Service handbook direction outlined in the previous section, the following points are considered in determining the economic impact area for this project:

- The project area is located in Ravalli County.
- The primary wood product being harvested is sawtimber and will most likely be transported to Missoula County (the nearest sawmills capable of handling the volume of product).
- Contractors and sub-contractors performing the project work will likely be both Missoula and Ravalli County residents.

Thus, the logical economic impact area for the project is comprised of Missoula and Ravalli Counties and will be analyzed as such.

3.15.3.2 Population and Demographics

According to the American Community Survey Office (ACS), the population of the economic impact area was 149,713 in 2012 (reported in Table 3.15- 2). Most of this population resides in Missoula County with a 2012 population of 109,402; Ravalli County had a 2012 population of 40,311. The impact area has experienced population growth of 13.5% since 2000 compared to a national rate of 9.8% over the same period.

Table 3.15- 2: Population, 2000-2012* (U.S. Department of Commerce 2014.)

	Missoula County	Ravalli County	Economic Impact Area	U.S.
Population (2012*)	109,402	40,311	149,713	309,138,711
Population (2000)	95,802	36,070	131,872	281,421,906
Population Change (2000-2012*)	13,600	4,241	17,841	27,716,805
Population Percent Change (2000-2012*)	14.2%	11.8%	13.5%	9.8%

* The data in this table are calculated by ACS using annual surveys conducted during 2008-2012 and are representative of average characteristics during this period.

Table 3.15- 3 reports the ethnic distribution within the economic impact area and the U.S. According to Census definitions, Hispanic or Latino may be of any race. As defined by the U.S. Census Bureau, race and Hispanic origin are two different concepts; thus, people of Hispanic origin may identify with any race. Because of this, summing the ethnic distribution in an area often results in a sum of greater than 100%. The majority of local residents are Caucasian.

Table 3.15- 3: Population by Race and Ethnicity- As a Percent of Total, 2012* (U.S. Department of Commerce 2014)

	Missoula County	Ravalli County	Economic Impact Area	U.S.
Hispanic or Latino (of any race)	2.7%	3.0%	2.7%	16.4%
Not Hispanic or Latino	97.3%	97.0%	97.3%	83.6%
White alone	90.9%	93.9%	91.7%	63.7%
Black or African American alone	0.4%	0.3%	0.4%	12.2%
American Indian alone	2.5%	0.8%	2.1%	0.7%
Asian alone	1.1%	0.5%	0.9%	4.8%
Native Hawaiian & Oth.Pacific Is. alone	0.1%	0.0%	0.1%	0.2%
Some other race	0.1%	0.0%	0.1%	0.2%
Two or more races	2.2%	1.5%	2.0%	2.0%

* The data in this table are calculated by ACS using annual surveys conducted during 2008-2012 and are representative of average characteristics during this period.

3.15.3.3 Employment and Income

Table 3.15- 4 shows the job distribution by occupation in the impact area and the U.S. Over 81% of the jobs in the impact area are in the professional, service, and sales categories. About 1% is in forestry and agriculture.

Poverty is an important indicator of economic well-being. For public land managers, understanding the extent of poverty is important for several reasons. First, people with limited income may have different needs, values, and attitudes as they relate to public lands. Second, proposed activities on public lands may need to be analyzed in the context of whether people who are economically disadvantaged could be disproportionately affected. Table 3.15- 5 shows the poverty status of individuals and families in the impact area. According to ACS, the impact area had a larger percentage of individuals below the poverty level than the nation as a whole. In 2012, 16.7% of

Missoula County residents and 14.6% of Ravalli County residents had incomes below the poverty threshold, compared to 14.9% for the U.S

Table 3.15- 4: Employment by Occupation- As a Percent of Total, 2012* (U.S. Department of Commerce 2014)

	MISSOULA COUNTY	RAVALLI COUNTY	ECONOMIC IMPACT AREA	U.S.
Management, professional, & related	36.7%	33.2%	35.9%	35.9%
Service	20.8%	18.0%	20.2%	17.8%
Sales and office	25.8%	23.5%	25.3%	24.9%
Farming, fishing, and forestry	0.8%	2.3%	1.1%	0.7%
Construction, extraction, maint., & repair	8.0%	13.1%	9.2%	8.6%
Production, transportation, & material moving	8.0%	9.9%	8.4%	12.1%

* The data in this table are calculated by ACS using annual surveys conducted during 2008-2012 and are representative of average characteristics during this period.

Table 3.15- 5: Poverty, 2012* (U.S. Department of Commerce2014)

	MISSOULA COUNTY	RAVALLI COUNTY	ECONOMIC IMPACT AREA	U.S.
People	107,492	39,993	147,485	301,333,410
Families	26,039	11,210	37,249	76,595,548
People Below Poverty	17,954	5,847	23,801	44,852,527
Families below poverty	2,241	1,146	3,387	8,363,024
People Below Poverty	16.7%	14.6%	16.1%	14.9%
Families below poverty	8.6%	10.2%	9.1%	10.9%

* The data in this table are calculated by ACS using annual surveys conducted during 2008-2012 and are representative of average characteristics during this period.

3.15.3.4 Federal Land

In some geographic areas, particularly in the West, more than half of the land base can be federal public lands. Understanding the makeup of the land base in an area is important because some actions on federal lands may affect the local economy, particularly if federal lands are a large portion of the land base. Additionally, some federal public lands prohibit most forms of commercial use and development. These include National Parks, Wilderness, and National Monuments, for example. Since these lands are managed primarily for their non-commercial values (i.e., scenery, wildlife, recreation), they potentially play a different economic role than public lands more commonly associated with commodity sectors. Geographic areas with federal public lands receive payments from the federal government related to these lands (e.g. Payments in Lieu of Taxes [PILT], the 25% Fund, Secure Rural Schools, and others). If these payments are a significant portion of the local

county's budget, then activities on public lands may have the potential to affect the fiscal well-being of a county. Depending on the type of payments a county receives, the fiscal health of the county may also be dependent on the level of appropriations from Congress.

As shown in Table 3.15- 6, 58.4% of the land in the impact area is under federal ownership. However, the difference between Ravalli and Missoula County is substantial. 43.5% of the land in Missoula County is federally owned, while federal land encompasses more than 74.5% of the area of Ravalli County. Almost all of the federal land is administered by the Forest Service within the economic impact area.

Table 3.15- 6: Land Ownership, 2012 (U.S. Geological Survey, Gap Analysis Program 2012)

	MISSOULA COUNTY	RAVALLI COUNTY	ECONOMIC IMPACT AREA	U.S.
Private Lands	39.7%	22.9%	31.7%	58.7%
Conservation Easement	1.9%	1.4%	1.7%	0.6%
Federal Lands	43.5%	74.5%	58.4%	28.8%
Forest Service	42.4%	74.2%	57.7%	8.4%
BLM	1.1%	na	0.6%	11.1%
National Park Service	na	na	na	3.4%
Military	na	na	na	1.1%
Other Federal	na	0.3%	0.1%	4.7%
State Lands	10.6%	2.6%	6.7%	8.4%
State Trust Lands*	6.0%	1.9%	4.0%	1.9%
Other State	4.6%	0.7%	2.7%	6.6%
Tribal Lands	6.0%	na	3.1%	4.0%
City, County, Other	0.1%	na	0.1%	0.2%

* Most state trust lands are held in trust for designated beneficiaries, principally public schools. Managers typically lease and sell these lands for a diverse range of uses to generate revenues for the beneficiaries.

3.15.4 Environmental Consequences

3.15.4.1 Alternative 1 – No Action

The no-action alternative would not harvest timber, implement BMPs on haul routes, or take any restorative actions and, therefore, incurs no financial costs. It would also produce no revenue, jobs, or income.

3.15.4.2 Alternatives 2, 3, and 4

Project Feasibility

As described in the methodology section of this report, the timber project is feasible if the estimated stumpage rate is greater than the base rate. Table 3.15- 7displays these values along with the number of acres and volume of timber harvested, by each alternative. The results show that each alternative is feasible. Table 3.15- 7 also shows the predicted high bid which is used for the financial efficiency analysis.

The volume of timber harvested is directly related to the number of acres harvested and the treatments proposed in each cutting unit; this is why the volume varies by alternative. Also, the estimated delivered log price is held constant for each alternative. The variation of the stumpage rate for each alternative, however, is more complicated because it reflects a wide array of costs

associated with the logging – most of which vary by alternative. These can be categorized as (1) stump-to-mill costs and (2) other logging costs.

Table 3.15- 7: Project Feasibility Summary

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Acres Harvested	1,088	1,010	949
Volume Harvested (CCF)	11,845	10,745	9,838
Base Rate ($/CCF)	3.00	3.00	3.00
Estimated Stumpage Rate ($/CCF)	21.77	44.09	38.16
Predicted High Bid ($/CCF)	40.98	63.30	57.37

Stump-to-mill costs include the direct cost of cutting, skidding, processing, loading, and hauling the trees to the mill. The stump-to-mill costs are most affected by the type of logging system (ground-based or skyline) required to cut and skid the trees, the size of the trees, the concentration of volume per acre, the skidding distance, and the haul distance from the cutting unit to the sawmill. The data required to calculate these variables are too numerous to list here however, the logging and hauling costs for each alternative are summarized in the Table 3.15- 8.

Table 3.15- 8: Stump-to-mill Costs ($/CCF)*

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Ground-based logging	55.61	62.66	64.84
Skyline Logging	19.54	8.43	5.31
Log Hauling	59.36	59.28	59.19
Total	134.51	130.36	129.34

*These values are calculated as the total cost of the item divided by the total sale volume.

Although Table 3.15- 8 shows differences in the logging costs, the total stump-to-mill costs are comparable for each alternative. The largest variations are in the logging costs for alternative 2. There are less ground-based logging acres and more skyline logging acres in alternative 2 than in the other alternatives; thus, those respective costs are lower and higher.

Other logging costs include other work required to facilitate logging. As shown in Table 3.15- 9, the other logging costs for this project are road maintenance, environmental, temporary roads, and specified roads. Environmental costs include brush disposal, erosion control, and other contractual requirements. Road maintenance includes the necessary work to support vehicle operations and implement Best Management Practices (BMPs). Temporary road costs include construction, maintenance, and rehabilitation of temporary roads. Rehabilitation of temporary roads include recontouring and erosion control work. Erosion control consists of applying seed and fertilizer to soil disturbed by harvesting activities. Specified road costs include construction or reconstruction of Forest Service system roads. Table 3.15- 9 shows other logging costs by alternative.

Table 3.15- 9: Other Logging Costs ($/CCF)*

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Road Maintenance	2.86	2.95	3.10
Environmental	9.20	6.54	7.00
Temporary Roads	4.46	0.00	1.99
Specified Roads	12.61	1.45**	5.81
Total	29.12	10.94	17.90

*These values are calculated as the total cost of the item divided by the total sale volume.

**Specified road cost for alternative 3 is for reconstruction only.

The largest cost differences outlined in Table 3.15- 9are in the temporary and specified road costs which are much higher in Alternative 2. This is because alternative 2 requires treatment in a number of cutting units that the Forest Service road system currently does not access, such as unit 41; this cutting unit has the single biggest road construction cost, at $7.32/CCF, or more than $86,000. The specified road cost for Alternative 3 is the lowest because Alternative 3 has no road construction.

In summary, each action alternative is feasible. Because the estimated delivered log price remains constant for all alternatives, the stumpage for each alternative varies based on logging costs and total volume harvested.

Financial Efficiency

The financial efficiency analysis is specific to the timber harvest and ecosystem management activities associated with the project (FSM 2400–Timber Management and FSH 2409.18). Costs for sale preparation, sale administration, and ecosystem restoration are included. All costs, timing, and amounts were developed by the specialists on the project's interdisciplinary team.

The expected revenue for each alternative is the predicted high bid from the sale feasibility analysis multiplied by the volume of timber harvested. The predicted high bid is used for the expected revenue (rather than the appraised stumpage rate) since the predicted high bid is the best estimate of the high bid resulting from the timber sale auction. The actual timber value will depend on the market when the timber is sold and may be higher or lower than the predicted high bid.

Because not all project costs are associated with the timber harvest, two versions of PNV will be calculated. The first PNV reflects sale preparation and administration costs, as well as required design criteria. Present Net Value is calculated using a 4 percent discount rate. Design criteria details may be found in the other resource reports. These costs and the associated PNV are shown in Table 3.15- 10. The PNV, calculated this way, is positive for all three action alternatives.

Table 3.15- 10: Mandatory Activity Expenditures and PNV ($)

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Sale Preparation	193,784	175,788	160,950
Sale Administration	203,734	184,814	169,214
Road BMP Upgrades	5,000	5,000	5,000
Barricade Placement Along Cutting Units	1,660	1,660	1,660
Total Costs	404,178	367,262	336,824
Total Revenue	485,408	680,158	564,406
PRESENT NET VALUE OF MANDATORY EXPENDITURES	**47,000**	**255,000**	**181,000**

All of the expenditures associated with the project that are not directly tied to the timber harvest are shown in Table 3.15- 11. The details of these restoration activities may be found in the respective resource sections in this chapter.

Table 3.15- 11: Restoration Activity Expenditures ($)

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Lick Creek Borrow Pit Rehabilitation	2,974	2,974	2,974
Additional Barricade Placement	4,399	4,399	4,399
Rehabilitation of Illegal OHV Trails	3,269	3,269	3,269

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Soil Rehabilitation on Skyline Corridors	172	101	0
Noxious Weed Treatment	7,210	6,090	5,950
Planting Bitter Brush	50,666	50,666	50,666
Fence Construction	12,000	12,000	12,000
Non-Commercial Thinning	186,586	372,420	321,047
Hand Pile Burning	22,410	22,060	18,604
Prescribed Burning	77,142	78,181	65,546
Total Costs	366,828	569,121	498,236

Another way to express PNV is by including all expenditures associated with the project as a whole, both harvest and restoration-related, as shown in Table 3.15- 12. When presented this way the PNV for each alternative is negative.

Table 3.15- 12: Total PNV Including All Proposed Expenditures ($)

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Total Costs*	771,006	936,383	835,060
Total Revenue	485,408	680,158	564,406
Total Present Net Value	**-280,578**	**-258,692**	**-268,417**

*This is the sum of the costs listed in Table 3.15- 10and Table 3.15- 11.

Economic Impact

The economic impact to the affected area (Missoula and Ravalli Counties) is expressed in terms of jobs contributed and labor income. These values are associated with timber harvest, reforestation, and restoration activities. In order to estimate jobs and labor income associated with reforestation and restoration activities, expenditures for these activities were developed by the resource specialists.

Table 3.15- 13 displays both direct and total estimates for employment (part and full-time) and labor income that may be attributed to the proposed action. The jobs and income shown are for both timber harvest and restoration related work and are over the life of the project. These are not new jobs or income, but rather jobs and income that can be attributed to this project.

The analysis assumes the timber volume processed would occur within the designated impact area. However, if some of the timber were processed outside the region, then a portion of the jobs and income would be lost by this regional economy.

Table 3.15- 13: Total Jobs and Labor Income Contributed over the Life of the Project (including timber and restoration work)

	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Direct Jobs	42	41	37
Total Jobs	82	78	72
Direct Labor Income ($)	2,133,000	2,052,000	1,889,000
Total Labor Income ($)	3,809,000	3,595,000	3,307,000